

1. Express 3.0 pascals (Pa) in equivalent newtons per square meter (N/m^2) and equivalent dynes per square centimeter (dyne/cm^2).
2. What derived physical quantity defines the time-rate change in displacement?
3. What derived physical quantity defines the time-rate change in velocity?
4. List the three fundamental physical quantities and the unit of measurement for each in the MKS system.
5. What acts as the restoring force in a vibrating spring-mass system?
6. Suppose you have 2 pendulums. Pendulum A is twice as long as pendulum B. Which pendulum will vibrate at a lower frequency? Why?

7. What is the period, in seconds, of each of the following:

a. 1000 Hz

b. 50 Hz

c. 4000 Hz

8. What is the corresponding frequency for each of the following periods:

a. 0.004 seconds

b. 0.01 seconds

c. 0.002 seconds